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ISO 55000:2024(en)
Asset management — Vocabulary, overview and principles
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Foreword
ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 251, *Asset management*.

This second edition cancels and replaces the first edition (ISO 55000:2014), which has been technically revised.

The main changes are as follows:

- — the document has been restructured to provide an insight and understanding of asset management and its principles, its outcomes and benefits, the relationship between asset management, an asset management system and the assets of an organization, and indicators of asset management maturity;
- — the principles of asset management have been revised;
- — the outcomes of asset management have been introduced;
- — the benefits have been rephrased and extended;
- — the explanation of the elements of an asset management system has been deleted;
- — the integration of management systems has been introduced;
- — the maturity of an asset management organization has been introduced;
- — the annexes have been deleted.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 Purpose

This document provides an overview of asset management, its principles, and the outcomes and expected benefits from adopting asset management, and introduces the asset management system and relevant terminology.

This document sets the context for ISO 55001 and ISO 55002, and also later documents in the ISO 55000 family of standards.

0.2 Relationship with other standards in the ISO 55000 family of standards

ISO 55001 specifies requirements for an asset management system. ISO 55002 gives guidance on the design and application of the asset management system.
This document, ISO 55001 and ISO 55002 can be used in combination with relevant sector-specific or asset-type-specific standards and technical specifications to achieve the objectives of asset management.
Other standards on asset management developed by ISO/TC 251 can be used in the context established by this document, ISO 55001 and ISO 55002, including:

- — ISO/TS 55010, which provides guidance on aligning financial and non-financial functions in asset management, and promoting understanding, implementation and improvement of this alignment for organizational benefits;
- — ISO 55011, which offers guidance for developing public policy to promote asset management, focusing on the external context of organizations responsible for assets, with the aim of creating an enabling environment through consistent public policy instruments;
- — ISO 55012, which focuses on people involvement and competence within an asset management system, offering guidance to enhance personnel commitment, effectiveness, knowledge and awareness, and promoting continual improvement;
- — ISO 55013, which provides guidance on managing data assets, helping organizations increase and sustain the usefulness of data assets to meet asset management and organizational objectives.

0.3 Target audience

This document is primarily intended for use by:

- — senior executives who wish to adopt asset management and implement an asset management system in their organization;
- — those involved in asset management or intending to become practitioners;
- — anyone who would benefit from a short introduction to asset management.

1 Scope

This document defines terms and establishes principles and outcomes for asset management. It describes:

- — the benefits of asset management and an asset management system;
- — the relationship between asset management, the asset management system and asset portfolio;
- — asset management improvement and maturity.

This document is applicable to all types of assets and all types and sizes of organizations.
This document does not provide financial, accounting, human resources nor technical guidance for managing specific asset types.
NOTE For the purposes of this document, ISO 55001 and ISO 55002, the term “asset management system” is used to refer to a management system for asset management.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- — ISO Online browsing platform: available at https://www.iso.org/obp
- — IEC Electropedia: available at https://www.electropedia.org/

3.1 Terms relating to assets

3.1.1

asset
item, thing or entity that has potential or actual *value* (3.3.28) to an *organization* (3.3.1)
Note 1 to entry: Assets can be physical or non-physical.
Note 2 to entry: A grouping of assets referred to as an *asset system* (3.1.6) can also be considered as an asset.

3.1.2
asset life
period from *asset* (3.1.1) ideation to asset end of life
Note 1 to entry: "Useful life" is the period over which an asset is capable of fulfilling a purpose to an entity.
Note 2 to entry: Asset life can differ from the period the *organization* (3.3.1) holds responsibility for the asset.
Note 3 to entry: End-of-life is when the asset can no longer cause any residual obligations.

3.1.3
life cycle
stages of an *asset* (3.1.1) during its life
Note 1 to entry: Each stage identifies different activities and *processes* (3.3.10).
Note 2 to entry: The naming of the stages and the activities under each stage can vary in different industry sectors and is determined by the *organization* (3.3.1). An example of the naming of the stages is: conception of need, design, construct, operate and maintain, renew/replace, dispose and extinguishment of liabilities.
Note 3 to entry: The contractual liability of an entity can involve less than one or multiple life cycle stages and may be shorter than an *asset life* (3.1.2).

3.1.4
life cycle management
applying *asset management* (3.2.1) over the *life cycle* (3.1.3) of *assets* (3.1.1)

3.1.5
asset type
grouping of *assets* (3.1.1) having common characteristics that distinguish those assets as a group or class

3.1.6
asset system
set of *assets* (3.1.1) that interact or are interrelated

3.1.7
asset portfolio
assets (3.1.1) that are within the scope of an *asset management system* (3.3.5)
Note 1 to entry: A portfolio is typically established and assigned for managerial control purposes.

3.1.8
critical asset
asset (3.1.1) having the potential to significantly impact the achievement of an *organization's* (3.3.1)*objectives* (3.3.7)
Note 1 to entry: Assets can be safety-critical, environment-critical or performance-critical and can relate to legal, regulatory or statutory *requirements* (3.3.16).
Note 2 to entry: Critical assets can refer to those assets necessary to provide services to critical customers.
Note 3 to entry: *Asset systems* (3.1.6) can be distinguished as being critical in a similar manner to individual assets.

3.1.9
object,noun

anything perceivable or conceivable
Note 1 to entry: An object can be physical (e.g. a pump, a bridge, a building), or non-physical (e.g. a project plan, copyright, software).

3.1.10
data
facts about an *object* (3.1.9)
[SOURCE:ISO 9000:2015, 3.8.1]

3.1.11
information
meaningful result of organizing and processing *data* (3.1.10)
EXAMPLE:
Make/model/type of a pump in a specific location, span of a bridge, *asset* (3.1.1)*performance* (3.3.13) indicator, an asset's current total cost of ownership.

3.2 Terms relating to asset management

3.2.1
asset management
coordinated activity of an *organization* (3.3.1) to realize *value* (3.3.28) from *assets* (3.1.1)
Note 1 to entry: Realization of value normally involves a balancing of costs, *risks* (3.3.8), *opportunities* (3.3.9) and *performance* (3.3.13) benefits.
Note 2 to entry: Activity can also refer to the application of the elements of an *asset management system* (3.3.5).
Note 3 to entry: The term "activity" has a broad meaning and can include, for example, the approach, planning and plans, and their implementation.

3.2.2
organizational objective
overarching *objective* (3.3.7) that sets the context and direction for an *organization's* (3.3.1) activities
Note 1 to entry: Organizational objectives are established through the strategic level planning activities of the organization.

3.2.3
organizational plan
documented information (3.3.12) that specifies the plans to achieve the *organizational objectives* (3.2.2)

3.2.4
management
coordinated activities to direct and control an *organization* (3.3.1)
Note 1 to entry: Management can include establishing strategies, *policies* (3.3.6) and *objectives* (3.3.7), and *processes* (3.3.10) to achieve those objectives.
Note 2 to entry: Management includes the processes of planning, organizing, directing and controlling (e.g. the outcomes of people, groups or organizations).
Note 3 to entry: Control can include defining roles, appointing authority, assigning tasks, establishing incentives and rewards, and empowering and engaging people.
Note 4 to entry: The word "management" sometimes refers to people, i.e. a person or group of people with the authority and responsibility for the conduct and control of an organization. When "management" is used in this sense, it should always be used with some form of qualifier, e.g. "top management".
Note 5 to entry: The term "management" can be qualified by a specific domain it addresses. Examples include public health management, environmental management and *risk* (3.3.8) management.

[SOURCE:ISO 9000:2015, 3.3.3, modified — “strategies” added to Note 1 to entry. Note 2 to entry shortened and renumbered as Note 4 to entry. Notes 2, 3 and 5 to entry added.]

3.2.5
asset management plan
AMP
documented information (3.3.12) that specifies the activities, resources, costs and timescales required for an individual *asset* (3.1.1), or a grouping of assets, to achieve an *organization’s* (3.3.1)*asset management* (3.2.1)*objectives* (3.3.7)
Note 1 to entry: The grouping of assets may be by *asset type* (3.1.5), asset class, *asset system* (3.1.6) or *asset portfolio* (3.1.7).
Note 2 to entry: An asset management plan is derived from the *strategic asset management plan* (3.3.29).
Note 3 to entry: An asset management plan may be contained in, or may be a subsidiary plan of, the strategic asset management plan.

3.2.6
capability
measure of capacity and the ability of an entity (system or *organization* (3.3.1)) to achieve its *objectives* (3.3.7)
Note 1 to entry: *Asset management* (3.2.1) capabilities include *processes* (3.3.10), resources, *competences* (3.3.11) and technologies to enable the effective and efficient development and delivery of *asset management plans* (3.2.5) and *asset life* (3.1.2) activities, and their *continual improvement* (3.3.14).

3.2.7
level of service
parameters, or combination of parameters, which reflect social, political, environmental and economic outcomes that an *organization* (3.3.1) delivers
Note 1 to entry: The parameters may include safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost and availability.

3.3 Terms relating to asset management system

3.3.1
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.3.7)
Note 1 to entry: The concept of organization includes, but is not limited to, sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.
Note 2 to entry: If the organization is part of a larger entity, the term “organization” refers only to the part of the larger entity that is within the scope of the *asset management system* (3.3.5).

3.3.2
stakeholder
interested party
person or *organization* (3.3.1) that can affect, be affected by, or perceive itself to be affected by a decision or activity

3.3.3
top management
person or group of people who directs and controls an *organization* (3.3.1) at the highest level
Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization.

Note 2 to entry: If the scope of the *management system* (3.3.4) covers only part of an organization, then top management refers to those who direct and control that part of the organization.

3.3.4
management system
set of interrelated or interacting elements of an *organization* (3.3.1) to establish *policies* (3.3.6) and *objectives* (3.3.7), as well as *processes* (3.3.10) to achieve those objectives

Note 1 to entry: A management system can address a single discipline or several disciplines.

Note 2 to entry: The management system elements include the organization's structure, roles and responsibilities, planning and operation.

3.3.5
asset management system
management system (3.3.4) for *asset management* (3.2.1)

3.3.6
policy
intentions and direction of an *organization* (3.3.1) as formally expressed by its *top management* (3.3.3)

3.3.7
objective
result to be achieved

Note 1 to entry: An objective can be strategic, tactical, or operational.

Note 2 to entry: Objectives can relate to different disciplines (such as finance, health and safety, and environment). They can be, for example, organization-wide or specific to a project, service, product or *process* (3.3.10).

Note 3 to entry: An objective can be expressed in other ways, e.g. as an intended result, as a purpose, as an operational criterion, as an asset management objective or by the use of other words with similar meaning (e.g. aim, goal, or target).

Note 4 to entry: In the context of *asset management systems* (3.3.5), asset management objectives are set by the *organization* (3.3.1), consistent with the asset management *policy* (3.3.6), to achieve specific results.

3.3.8
risk
effect of uncertainty on *objectives* (3.3.7)

Note 1 to entry: An effect is a deviation from the expected — positive or negative.

Note 2 to entry: Uncertainty is the state, even partial, of deficiency of *information* (3.1.11) related to, understanding or *knowledge* (3.3.26) of, an event, its consequence, or likelihood.

Note 3 to entry: Risk is often characterized by reference to potential events (as defined in ISO 31073) and consequences (as defined in ISO 31073), or a combination of these.

Note 4 to entry: Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood (as defined in ISO 31073) of occurrence.

3.3.9
opportunity
circumstance or set of circumstances that can be exploited to improve *performance* (3.3.13), exceed original *objectives* (3.3.7) and/or intended results, pursue additional objectives, or achieve *continual improvement* (3.3.14)

3.3.10
process

set of interrelated or interacting activities that uses or transforms inputs to deliver a result
Note 1 to entry: Whether the result of a process is called an output, a product or a service depends on the context of the reference.

3.3.11
competence
ability to apply *knowledge* (3.3.26) and skills to achieve intended results

3.3.12
documented information
information (3.1.11) required to be controlled and maintained by an *organization* (3.3.1) and the medium on which it is contained
Note 1 to entry: Documented information can be in any format and media and from any source.
Note 2 to entry: Documented information can refer to:

- — the *management system* (3.3.4), including related *processes* (3.3.10);
- — information created in order for the organization to operate (documentation);
- — evidence of results achieved (records).

3.3.13
performance
measurable result
Note 1 to entry: Performance can relate either to quantitative or qualitative findings.
Note 2 to entry: Performance can relate to managing activities, *processes* (3.3.10), products, services, systems or *organizations* (3.3.1).
Note 3 to entry: For the purposes of *asset management* (3.2.1), performance can relate to *assets* (3.1.1) in their ability to fulfil *requirements* (3.3.16) or *objectives* (3.3.7) and thereby their ability to realize *value* (3.3.28).

3.3.14
continual improvement
recurring activity to enhance *performance* (3.3.13)

3.3.15
effectiveness
extent to which planned activities are realized and planned results are achieved

3.3.16
requirement
need or expectation that is stated, generally implied or obligatory
Note 1 to entry: “Generally implied” means that it is custom or common practice for the *organization* (3.3.1) and *stakeholders* (3.3.2) that the need or expectation under consideration is implied.
Note 2 to entry: A specified requirement is one that is stated, e.g. in *documented information* (3.3.12).

3.3.17
conformity
fulfilment of a *requirement* (3.3.16)

3.3.18
nonconformity
non-fulfilment of a *requirement* (3.3.16)
Note 1 to entry: Nonconformity can be any deviation from *asset management system* (3.3.5)*requirements* (e.g. from relevant work standards, practices, procedures, legal requirements) or any failure of an *asset* (3.1.1) to meet or perform to specification.

3.3.19
corrective action
action to eliminate the cause(s) of a *nonconformity* (3.3.18) and to prevent recurrence
3.3.20
preventive action
action to eliminate the cause of a potential *nonconformity* (3.3.18) or other undesirable potential situation
Note 1 to entry: There can be more than one cause for a potential nonconformity.
Note 2 to entry: Preventive action is taken to prevent occurrence and to preserve an *asset's* (3.1.1) function whereas *corrective action* (3.3.19) is taken to prevent recurrence.
Note 3 to entry: Preventive action is normally carried out while the asset is functionally available and operable or prior to the initiation of functional failure.
Note 4 to entry: Preventive action includes the replenishment of consumables where the consumption is a functional requirement.
3.3.21
predictive action
action that predicts future behaviour of a parameter required to support decision-making
Note 1 to entry: Predictive actions inform *asset management* (3.2.1) decisions inclusive of preventing and/or correcting a *nonconformity* (3.3.18) as well as the realization of maximum *value* (3.3.28) from an *opportunity* (3.3.9).
Note 2 to entry: Predictive actions do not alter the state of *assets* (3.1.1) and/or systems themselves.
Note 3 to entry: Predictive actions are a precursor, but not a prerequisite, to decision-making.
Note 4 to entry: Predictive actions may include the following activities: stock market analysis, venture capital acquisition, exploration, research, investigation, experimentation, modelling, testing, surveillance, *monitoring* (3.3.25), statistical analyses, calculations, algorithm development, expert system development, artificial intelligence system development, digital twinning, alarm and warning system development.
3.3.22
incident
unplanned event or occurrence
3.3.23
audit
systematic and independent *process* (3.3.10) for obtaining evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled
Note 1 to entry: An audit can be an internal audit (first party) or an external audit (second party or third party) and it can be a combined audit (combining two or more disciplines).
Note 2 to entry: An internal audit is conducted by the *organization* (3.3.1) itself, or by an external party on its behalf.
Note 3 to entry: "Audit evidence" and "audit criteria" are defined in ISO 19011.
3.3.24
measurement
process (3.3.10) to determine a *value* (3.3.28)
Note 1 to entry: In this definition a "value" refers to a numerical value, which is different than value in the context of *stakeholder's* (3.3.2) value or *asset management* (3.2.1) value.
3.3.25

monitoring
determining the status of a system, a *process* (3.3.10) or an activity
Note 1 to entry: To determine the status, there can be a need to check, supervise or critically observe.
Note 2 to entry: For the purposes of *asset management* (3.2.1), monitoring can also refer to determining the status of an *asset* (3.1.1). This is typically referred to as “condition monitoring” or “performance monitoring”.

3.3.26
knowledge
understanding of facts, information and principles acquired through experience, research or education
Note 1 to entry: Asset management knowledge can be derived from:

- a) internal sources (e.g. intellectual property; knowledge gained from experience; lessons learned from failures and successful initiatives; bodies of knowledge; informal sources of knowledge and experience of people; the results of improvements in *processes* (3.3.10), products and services; simulation models); reference can be made to ISO 30401 for additional guidance;
- b) external sources (e.g. standards; books, academia; conferences; gathering knowledge from customers, collaborators or external providers).

3.3.27
sustainability
state of the global system, including environmental, social and economic aspects, in which the needs of the present are met without compromising the ability of future generations to meet their own needs
Note 1 to entry: The environmental, social and economic aspects interact, are interdependent and are often referred to as the three dimensions of sustainability.
Note 2 to entry: Sustainability is the *objective* (3.3.7) of sustainable development.
Note 3 to entry: In *asset management* (3.2.1), sustainability of *assets* (3.1.1) or *asset systems* (3.1.6) refer to their ability to meet present *objectives* without compromising their ability to meet future *objectives*.
[SOURCE:ISO Guide 82:2019, 3.1, modified — In Note 2 to entry, “goal” has been replaced by “objective”. Note 3 to entry has been added.]

3.3.28
value
results from satisfying needs and expectations
Note 1 to entry: Value represents the result of considering positive and negative impacts, as well as financial and non-financial impacts, on *stakeholders* (3.3.2) over a time horizon that includes all such impacts.

3.3.29
strategic asset management plan
SAMP
documented information (3.3.12) that contains and aligns *asset management* (3.2.1)*policy* (3.3.6), *objectives* (3.3.7), strategies and approaches for developing and managing the *asset portfolio* (3.1.7) and the *asset management system* (3.3.5)
Note 1 to entry: A SAMP is derived from, may be contained in, or may be a subsidiary plan of, the *organizational plan* (3.2.3).

3.3.30
framework
structure of *processes* (3.3.10) and specifications designed to support the accomplishment of a specific task

Note 1 to entry: The framework for *asset management* (3.2.1) decision-making is used by the *organization* (3.3.1):

- — in defining and determining the *value* (3.3.28) that it aims to derive from its *assets* (3.1.1) by applying asset management;
- — in defining the criteria to be used for asset management decision-making to achieve value.

Only informative sections of standards are publicly available. To view the full content, you will need to purchase the standard by clicking on the "Buy" button.

Bibliography

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[2] ISO 19011, *Guidelines for auditing management systems*

[3] ISO 30401, *Knowledge management systems — Requirements*

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[9] ISO 55012, *Asset management — Guidance on people involvement and competence*

[10] ISO 55013, *Asset management — Guidance on the management of data assets*

[11] ISO Guide 82:2019, *Guidelines for addressing sustainability in standards*

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